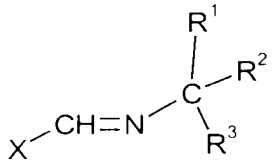
WHAT IS CLAIMED IS:

1. A process for preparing a 2-alkyl-aryl- or -heteroaryloxaziridine comprising oxidizing a corresponding N-alkyl-aryl- or -heteroarylaldimine with an aromatic percarboxylic acid or a salt thereof in the presence of water, a water-soluble base, and a water-miscible solvent, at temperatures below 30°C.

2. A process according to Claim 1 wherein an N-alkyl-aryl- or -heteroarylaldimine of the formula (I)



(I),

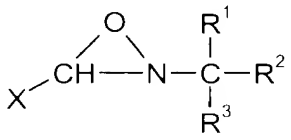
wherein

R^1, R^2, and R^3 independently of one another each represent hydrogen, straight-chain or branched C_1-C_{20}-alkyl, C_3-C_8-cycloalkyl, straight-chain or branched C_2-C_{10}-alkenyl, or C_6-C_{10}-aryl, or the entire $C(R^1)(R^2)(R^3)$ group represents a C_3-C_8-cycloalkyl radical, and

X represents C_6-C_{12}-aryl or heteroaryl having 4 or 5 C atoms and 1 or 2 identical or different heteroatoms selected from the group consisting of N, O, and S,

wherein all alkyl, cycloalkyl, alkenyl, aryl, and heteroaryl radicals may optionally be mono- or polysubstituted,

is oxidized to form the corresponding 2-alkyl-3-aryl- or -heteroaryloxaziridines of the formula (II)



(II),

in which R^1, R^2, R^3, and X are as defined for formula (I).

3. A process according to Claim 2 wherein one or more alkyl radicals are mono- or polysubstituted by saturated C_3-C_{12}-cycloalkyl,

C_6-C_{10}-aryl, C_2-C_8- alkenyl, fluorine, chlorine, bromine, iodine, hydroxyl, C_1-C_6-alkoxy, C_6-C_{10}-aryloxy, carboxyl, C_1-C_6-alkoxycarbonyl, nitro, amido, nitrile, sulfonyl, or phosphate and wherein one or more cycloalkyl, alkenyl, aryl, and heteroaryl radicals are mono- or polysubstituted by C_1-C_6-alkyl, fluorine, chlorine, bromine, hydroxyl, C_1-C_6-alkoxy, carboxyl, C_1-C_6-alkoxycarbonyl, nitro, sulfonyl, or nitrile.

4. A process according to Claim 2 wherein in formulas (I) and (II),

R^1, R^2, and R^3 independently of one another each represent hydrogen, straight-chain or branched C_1-C_{10}-alkyl, C_3-C_6-cycloalkyl, straight-chain or branched C_3-C_6-alkenyl, or phenyl or the entire $C(R^1)(R^2)(R^3)$ group represents C_3-C_6-cycloalkyl, wherein the radicals are not substituted any further, and

X represents phenyl, naphthyl, or furyl, wherein the phenyl and naphthyl radicals may optionally be substituted by one or two identical or different radicals selected from the group consisting of C_1-C_6-alkyl, fluorine, chlorine, bromine, hydroxyl, C_1-C_6-alkoxy-carbonyl, nitro, sulfonyl, and nitrile.

5. A process according to Claim 1 wherein the percarboxylic acid or the salt thereof is m-chloroperbenzoic acid or monoperoxyphthalic acid or an alkali metal or magnesium salt thereof.

6. A process according to Claim 1 wherein the water-soluble base is an alkali metal or alkaline earth metal oxide, hydroxide, carbonate, bicarbonate, hydrogen phosphate, or dihydrogen phosphate.

7. A process according to Claim 1 wherein the water-miscible solvent is a mono- or polyhydric alcohol having up to 6 C atoms.

8. A process according to Claim 2 comprising

(1) initially preparing a mixture comprising 5 to 80% by weight of the aldimine of the formula (I) in the water-miscible solvent,

(2) reacting the mixture with the aqueous solution comprising 15 to 30% by weight of a base,

(3) adding a 1 to 20% by weight strength solution of an aromatic percarboxylic acid or a salt thereof to the resulting mixture at such a rate that the reaction temperature does not exceed 30°C,

(4) stirring the resulting mixture at from 5 to 30°C until the reaction has ended, and

(5) working up the reaction mixture by phase separation or extraction.

9. A process according to Claim 2 wherein, based on the aldimine of the formula (I), from 0.09 to 2 equivalents of base and from 0.9 to 1.2 equivalents of active oxygen in the form of an aromatic percarboxylic acid or salt thereof are used.

10. 2-Isopropyl-3-(4-methoxyphenyl)oxaziridine.

11. 2-n-Propyl-3-(4-methoxyphenyl)oxaziridine.